

Abstract

The present invention is directed toward methods and apparatus for packet transmission scheduling in a data communication network. In one aspect, received data packets are assigned to an appropriate one of a plurality of scheduling heap data structures. Each scheduling heap data structure is percolated to identify a most eligible data packet in each heap data structure. A highest-priority one of the most-eligible data packets is identifying by prioritizing among the most-eligible data packets. This is useful because the scheduling tasks may be distributed among the hierarchy of schedulers to efficiently handle data packet scheduling. Another aspect provides a technique for combining priority schemes, such as strict priority and weighted fair queuing. This is useful because packets may have equal priorities or no priorities, such as in the case of certain legacy equipment.